

REMARKS

The present amendment is responsive to the Office Action of November 16, 2004, which Action was made "final".

Claims 1 and 8 were rejected under 35 USC 102 as being anticipated by Morton '863; and Claims 2, 3, 5-7, and 9-17 were rejected under 35 USC 103 as being unpatentable over Morton '863 in view of Burge '220.

Reference is made to Applicants' remarks in the prior Amendment A of August 4, 2004.

Applicants respectfully urge that Applicants' claims are not at all anticipated or obvious in view of the combination of the cited references, singly or combined.

Applicants' respective claims are urged to be quite patentable over the Morton and/or Burge patents.

Applicants' claimed apparatus can be utilized in the field and independently, which cannot be done with the apparatus of the cited references.

In Morton, a standard solution containing a known metal concentration is pumped from a standard solution into the water stream, and finally the concentration of analytes (metal) in a water sample from a second flow path is determined.

There is no possible way for the apparatus of Morton to create or develop an external calibration curve which would require the preparation of standards with the analytes not present. In contrast, Morton teaches injection of standards in water already containing the analyte. In the Morton apparatus two flow paths are directed to different respective sensors, and the two paths are not later reunited as in Applicants' system. In Applicants' arrangement the analyte is first removed and is later re-injected into the water in an exact concentration to create external calibration standards. If the Morton analyte were so removed there would be no way for a sample containing the analyte to be introduced to a sensor, all having been removed earlier by a filter.

Claims 1 and 8 are amended to clearly distinguish over the references and appropriately define the invention.

The dependent Claims 2, 3, 5-7 and 9-17 specify further respective limitations and combinations, and are believed and urged to be allowable with their parent Claims 1 and 8.

In Morton, the two flow paths are directed to two respective sensors, and these paths are not reunited, as they are in Applicants' arrangement, thus to enable one sensor to analyze water from both flow paths.

The second flow path in Morton passes to a different respective sensor than the first flow path, and there is no flow path to a sensor connected to the same flow path as the water filter. The Morton system thus is incapable of creating an external calibration curve, whereas in contrast, Applicants' system requires and can provide the same.

Morton utilizes a quantitative method known as the "method of standard additions" and not at all the method of an external calibration curve, as in Applicants' arrangement. Preparation of an external calibration curve requires preparation of standards with the analyte not present, whereas in Morton there is an injection of standards to water already containing the analytes.

Applicants' claimed system enables external calibration. This result and advantage is a result of the diversion and the reuniting of the two flow paths, in contrast with the diversion of different sensor means in Morton.

Applicants' utilization of the two flow paths enables analysis to be performed in the field and a field deployable apparatus. Such field deployment capabilities are not at all obvious and are not suggested by the cited references.

The U.S. Government Defense and Energy Departments have expended millions of dollars in research relative to field deployable instruments, without success. Applicants' apparatus, claimed herein, has been approved and successfully utilized in service.

The combinations defined in the respective claims are urged not be anticipated or made obvious in view of the cited references or art known to Applicants.

It is respectfully urged that all the claims presently in the application are allowable, and allowance is respectfully solicited.

It is submitted that the foregoing is fully responsive to the November 16, 2004 Office Action, that all the claims in the application are allowable, and that the application is in condition for allowance. Allowance is respectfully solicited.

If a telephone interview would be helpful in expediting prosecution, it would be appreciated if the Examiner would telephone Applicants' attorney, at (626) 338-0100.

Respectfully submitted,  
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